

VES Bottom Hole Location is
68.91' @ 128.95° of Surface
Location

VES LEGEND	
	Surface Location Highlight
	Bottom Hole Location
	° of SL Direction Line
	North Indicator
	VES Bottom Hole Text Box

LEGEND

- - Denotes Proposed Well Location
- - Denotes Producing Well Location
- ⊙ - Denotes Found Monument (As Described)
- - Denotes Calculated Corner this Survey
- - Denotes Lease Line
- - Denotes Proration Unit Line

Date Surveyed: April 26, 2010
Weather: Warm & Clear

The 9805 JV-P Warwink #2 is located approximately 11 miles Northwest of Pyote, Texas.

NOTE:

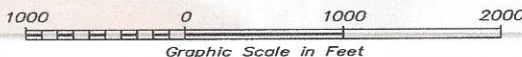
1) All Coordinates and Bearings shown hereon "unless otherwise noted" are Lambert, Grid and Conform to the "Texas Coordinate System", Texas Central Zone, North American Datum of 1927. Distances shown hereon are mean horizontal surface values.

2) Geodetic Coordinate shown hereon references the North American Datum of 1927, (Clarke Spheroid of 1866). Reference Stations - "ODESSA ARP" - CORS (DL2764), "MCDONALD VLEI ARP" - CORS (AF9514) and "ROSWELL ARP" - CORS (DG6517).

3) See information filed in the office of this Surveyor which describes the reconstruction of this Section.

Geodetic Coordinate NAD83
Latitude = 31°36'05.65" N
Longitude = 103°17'43.52" W

Geodetic Coordinate
Latitude = 31°36'05.18" N
Longitude = 103°17'41.91" W



I HEREBY CERTIFY THAT THIS SURVEY WAS MADE FROM NOTES TAKEN IN THE FIELD AND A SODA TIDE SURVEY MADE UNDER MY SUPERVISION.

J. FRANK NEWMAN TEXAS R.P.L.S. No. 5011
MACON McDONALD TEXAS R.P.L.S. No. 4598
R. CRAIG ALDERMAN TEXAS R.P.L.S. No. 5285
WEST COMPANY
of Midland, Inc.
110 W. LOUISIANA, STE. 110
MIDLAND TEXAS, 79701
(432) 687-0865 - (432) 687-0868 FAX

BTA OIL PRODUCERS

Location of the
9805 JV-P WARWINK #2
1980' FNL & 660' FWL
Section 27, Block 18
University Land Survey
Ward County, Texas

Drawn By: ALC	Date: May 4, 2010
Scale: 1"=1000'	Field Book: 455 / 67-68
Revision Date:	Quadrangle: Soda Lake SE
W.O. No: 2010-0434	Dwg. No.: 2010-0434

475-35578

VES Bottom Hole Location is 68.91' @ 128.95° of Surface Location

MD / FT	10,738.00		10,735.39	TVD / FT
North / FT	South / FT		East / FT	West / FT
	43.32		53.59	

VES SURVEY INTERNATIONAL

696104



Company: BTA OIL PRODUCERS, LLC
Lease/Well: 9805 JV-P WARWINK/2

Rig Name: PULLING UNIT
State/County: TEXAS/WARD
VS-Azi: 0.00 Degrees

Latitude: 31.60144, Longitude: -103.29497
Grid North = True North +1.53 degs (NAD 27)
Grid Correction Applied = +1.53 degs



FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : GROUND LEVEL

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: e-line_gyro-de_01.ut
Minimum Curvature Method
Report Date/Time: 4/12/2017 / 14:33

VES SURVEY INTERNATIONAL
MIDLAND, TEXAS
432-563-5444
Surveyor: JAMES NEIL BATES
9805 JV-P Warwink 2 / API #42-475-35578

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
200.00	0.45	114.25	200.00	-0.33	0.72	-0.33	0.79	114.25	0.23
400.00	0.17	139.58	399.99	-0.88	1.64	-0.88	1.86	118.20	0.15
600.00	0.43	137.40	599.99	-1.65	2.33	-1.65	2.86	125.30	0.13
800.00	0.16	143.97	799.99	-2.42	3.00	-2.42	3.85	128.91	0.14
1000.00	0.47	130.69	999.99	-3.17	3.77	-3.17	4.93	130.03	0.16
1200.00	0.27	163.49	1199.98	-4.15	4.52	-4.15	6.14	132.52	0.14
1400.00	0.54	124.95	1399.98	-5.14	5.43	-5.14	7.47	133.40	0.19
1600.00	0.59	85.64	1599.97	-5.60	7.23	-5.60	9.15	127.73	0.19
1800.00	1.02	53.02	1799.95	-4.45	9.69	-4.45	10.66	114.66	0.31
2000.00	1.24	45.61	1999.91	-1.86	12.66	-1.86	12.80	98.35	0.13
2200.00	1.23	51.61	2199.86	0.99	15.90	0.99	15.93	86.42	0.07
2400.00	2.33	50.15	2399.76	4.93	20.70	4.93	21.27	76.60	0.55
2600.00	2.38	56.52	2599.60	9.82	27.28	9.82	28.99	70.20	0.13
2800.00	2.57	59.73	2799.41	14.38	34.62	14.38	37.49	67.45	0.12

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
3000.00	2.56	59.12	2999.21	18.93	42.33	18.93	46.37	65.90	0.02
3200.00	1.41	62.62	3199.08	22.35	48.34	22.35	53.26	65.19	0.58
3400.00	0.13	180.09	3399.07	23.25	50.53	23.25	55.62	65.29	0.74
3600.00	0.44	148.32	3599.06	22.36	50.94	22.36	55.63	66.30	0.17
3800.00	0.15	167.84	3799.06	21.46	51.40	21.46	55.70	67.34	0.16
4000.00	0.81	108.78	3999.05	20.75	52.79	20.75	56.72	68.54	0.37
4200.00	1.99	84.31	4198.99	20.64	57.58	20.64	61.17	70.28	0.65
4400.00	1.55	75.80	4398.90	21.65	63.66	21.65	67.24	71.22	0.26
4600.00	1.53	59.18	4598.82	23.68	68.57	23.68	72.55	70.95	0.22
4800.00	1.99	54.26	4798.73	27.08	73.68	27.08	78.50	69.82	0.24
5000.00	1.47	59.07	4998.64	30.42	78.69	30.42	84.36	68.87	0.27
5200.00	0.53	109.27	5198.61	31.43	81.75	31.43	87.58	68.97	0.60
5400.00	0.71	86.69	5398.60	31.20	83.86	31.20	89.47	69.59	0.15
5600.00	0.43	128.32	5598.59	30.81	85.68	30.81	91.05	70.22	0.24
5800.00	0.23	184.10	5798.58	29.95	86.24	29.95	91.29	70.85	0.18
6000.00	0.48	138.55	5998.58	28.93	86.76	28.93	91.46	71.56	0.18
6200.00	0.46	150.93	6198.57	27.61	87.70	27.61	91.95	72.53	0.05
6400.00	0.46	110.76	6398.57	26.62	88.84	26.62	92.75	73.32	0.16
6600.00	0.26	109.51	6598.56	26.19	90.01	26.19	93.75	73.78	0.10
6800.00	0.15	89.16	6798.56	26.04	90.70	26.04	94.36	73.98	0.06
7000.00	0.24	66.68	6998.56	26.21	91.35	26.21	95.03	73.99	0.06
7200.00	0.67	142.98	7198.56	25.44	92.44	25.44	95.87	74.61	0.33
7400.00	0.53	201.34	7398.55	23.65	92.80	23.65	95.77	75.70	0.30
7600.00	1.17	251.22	7598.53	22.13	90.53	22.13	93.19	76.27	0.46
7800.00	0.72	204.72	7798.50	20.32	88.06	20.32	90.37	77.01	0.43
8000.00	1.13	223.28	7998.47	17.74	86.18	17.74	87.99	78.37	0.25
8200.00	0.86	214.37	8198.44	15.08	83.99	15.08	85.33	79.82	0.15
8400.00	1.04	221.32	8398.42	12.47	81.94	12.47	82.89	81.35	0.11
8600.00	1.13	231.96	8598.38	9.89	79.19	9.89	79.80	82.88	0.11
8800.00	0.76	223.73	8798.35	7.71	76.71	7.71	77.10	84.26	0.20
9000.00	1.62	209.83	8998.31	4.31	74.40	4.31	74.52	86.69	0.45
9200.00	1.69	185.19	9198.23	-1.07	72.73	-1.07	72.73	90.84	0.35
9400.00	1.98	178.90	9398.13	-7.46	72.53	-7.46	72.91	95.87	0.18
9600.00	1.81	181.20	9598.02	-14.07	72.53	-14.07	73.88	100.98	0.09
9800.00	1.62	172.66	9797.93	-20.03	72.82	-20.03	75.53	105.38	0.16
10000.00	1.25	224.17	9997.87	-24.40	71.66	-24.40	75.70	108.80	0.64
10200.00	1.96	232.60	10197.79	-28.04	67.43	-28.04	73.03	112.58	0.37
10400.00	1.80	217.60	10397.69	-32.60	62.80	-32.60	70.76	117.43	0.26
10600.00	2.75	223.27	10597.53	-38.58	57.60	-38.58	69.33	123.81	0.49
10738.00	2.42	216.82	10735.39	-43.32	53.59	-43.32	68.91	128.95	0.31

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
HORIZONTAL DISPLACEMENT IS 68.91 FEET AT 128.95 DEGREES									



I James Neil Bates certify that I am employed by VES Survey International. That I did on the day(s) of 04/07/17 through 04/07/17 conduct or supervise the taking of a Rate Gyro survey from a depth of 0.00 feet to a depth of 10,738.00 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Vaughn Energy Services, that I am authorized and qualified to make this report; that this survey was conducted at the request of BTA Oil Producers, LLC for the 9805 JV-P Warwink Well # #2 API # 42-475-35578 in Ward County / Parish Texas; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by VES Survey International.

A handwritten signature in blue ink, appearing to read "James Neil Bates", is written over a horizontal line.

James Neil Bates
Service Technician
VES Survey International